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THE WORKING BOY.

THE essential point to be kept in mind in the discussion of trade and technical education is this, that ours is the epoch of industrial instability, by reason of which the working boy of today needs not so much any one trade, as that combination of qualities which will enable him to turn with facility from one occupation to another as each, in turn, is supplanted in the course of the industrial evolution.

The epoch of trades was the epoch of industrial stability. When the apprentice married the master's daughter and inherited the stock and goodwill, and everything went on from generation to generation as in the case of the Elzevirs, whose craft descended from father to son, to grandson, to great-grandson, it was well worth while for the lad to leave school early and pursue the "three R's" only in the intervals of gaining his daily bread. His future was assured.

Ours being the epoch of industrial instability, of shifting and change, the point is to recognize the law of change and adapt our scheme of education to it, so that the processes of industrial evolution may no longer bring surprise and disaster. Nay, more, the problem of the schools today is, so to equip the children that they not only meet unharmed the changes which will surely make up their industrial life, but contribute their share to render these changes beneficent. This our present education fails to do; and the introduction of new machinery, therefore, brings unmeasured harm to tens of thousands of skilled workmen and their families. By way of illustration, it is only necessary to point to the compositors, the railway engineers, and the tailors.

The introduction of the linotype into the newspaper offices of Chicago, while it increased the size of the great dailies, threw a large number of skilled workmen out of employment. Many

compositors were obliged to leave the city. Others found work in the job printing and other branches of the trade, where they, in turn, contributed to overstock the labor market. Compositors, however, are relatively versatile men, better able to help themselves than men usually are in a trade requiring a less degree of intelligence. They form an apt illustration of the contention that the need of today is not so much skill as facility in acquiring skill and adapting oneself to the conditions of a new occupation.

What has befallen the compositors during the past two years is looming large upon the horizon of the locomotive engineers in the present year. These engineers have long been recognized as one of the most responsible bodies of skilled labor in the world. But the motorman is with us now, and he merely touches the button and the motor does all the rest. He is rapidly and surely undermining the suburban engineer, working 365 days in the year, his wages ranging from \$1 to \$1.35 per day of twelve to sixteen hours. Indeed, all that saves the great body of skilled railroad engineers today is the fact that the motor, thus far, is confined to suburban traffic; but no one is so fatuous as to believe that this restriction is a permanent one.

Most disheartening is the situation of the tailors. The introduction of the steam-cutting knife has enabled the American Clothing Trust to reduce the skilled cutters to the level of precariousness of work and pay of the sweaters' victims. Some of the cutters being able men, and, like the compositors, relatively versatile, have developed into designers, traveling men, merchant tailors and sweaters on a small scale. These, however, are the chosen few; while the general level of work and pay has suffered a deterioration from which there is not likely to be any recovery.

The custom-tailor, in turn, sees himself confronted with the sweater in the custom trade, and with the introduction of steam into the sweatshop, followed by the inevitable little girl at the machine. Moreover, the invention of an improved buttonhole machine enables a girl who can neither read, write, nor sew a sim-

ple seam, to make a thousand gross of buttonholes in a single season.

The sweaters' victims are, perhaps, the least versatile of all the indoor-trades employés. For them, being crowded out of their narrow groove by a technical improvement means actual starvation. In Chicago, during the present season, the suicide of a tailor has been a matter of almost daily occurrence and scarcely elicits more than a passing newspaper comment. And for one suicide there are many paupers.

It may be said that the occupations cited are exceptional, that the old fundamental trades of the builder of houses and the baker of bread cannot be supplanted, or are, at least, in no immediate danger of it; that the mason, the carpenter, and the baker are here to stay. To this it must be replied that the sash-door-and-blind factory is enabling the stupidest little boy to turn out more carpenter work, of certain kinds, than the best graduate of the best trade school could do twenty years ago. The new steel-frame construction is transferring to the girder-molder and the structural iron worker the task which fell to the mason from the days of the pyramids to the close of the Civil War. And, finally, one of the most persistent and urgent duties of factory inspectors is finding and removing the little boys who get into the bakeries under the legal age of work and there, with the help of the perfected equipment of the American Biscuit Trust, do that work of breadmaking which once fell to the housewife, but now escapes, day by day, from the adult baker to the little boy at the machine.

We are sending shoes, harnesses, chairs, bicycles and watches from Chicago to London, there to compete successfully, under the conditions of free trade, with the finest manufactured product of all the world. Now these shoes, harnesses, chairs, bicycles and watches are in no case made by one all-round, skilled worker, but by the finest machinery to be found in the respective branches of manufacture. The only skill required is that of the narrowest specialist; and this specialist can be replaced by a boy or a machine more easily than he can learn all the

knacks to which the various parts of his trade have been reduced. Thus the evolution of the machine, while it rescues our product from the old charge of crudity, narrows both our men and our trades to the point at which any one trade is hardly worth having.

Accepting this shrinkage in the scope of the individual trade as inevitable at this stage of the industrial evolution, the question is, What, if anything, may be done by education to counterbalance its effects?

The policy of training boys for one narrow trade cannot permanently commend itself to thinking men and women, in an epoch of industrial change. On the contrary, the more specialized the processes of commerce and manufacture become, the more must we insist on the education of all the thinking powers of all the workers. The more stupefyingly monotonous the manipulation which the machine prescribes, the more must all stress be laid upon variety and thoroughness in the training of mind, as well as hand, of all who are to tend machines. The greater the probability that the boy will be a motorman, merely pressing a button; that the compositor will be supplanted by the linotype and the tailor by the little girl at the machine, the more must the school do for all three that which their occupations can no longer do for them, namely, teach them to think and live, and use all their faculties. The more precarious the position of the skilled man, the more must we demand of the schools versatility, thoroughness, and the effort to make valuable people of the whole body of children.

One thing the present situation does demand, a combination of alertness, adaptability, and self-reliance. Whoever watches any machine must have quick attention and avoid Blue Monday; and when the occupation gives out, he must have enterprise to find or make another opportunity.

We shall all agree that education can do much to meet the need of the working boy, now that the old apprenticeship is gone and the new mechanical industry is in full swing. It is only when we come to the question of methods of education

that we shall disagree; for some will be content with a good provision for a corporal's guard, and others will maintain that the industrial army can best be made available only by educating the whole body of troops, thinking any scheme which looks to fitting a few hundred older boys for a limited number of occupations of little value to the nation or to the boys themselves.

At two points an attempt at adaptation has been made, neither of which, however, touches the boy under discussion. For the boy who is to be a captain of industry we have the technical school in some variety, from the Massachusetts School of Technology to the Armour Institute. At the other end of the educational chain we have the kindergarten, which postulates the truth that the child, as such, needs to have his fashioning faculties developed and proceeds to do this for purely pedagogical reasons. Between these two extremes there remain, however, several missing links; and it is to this middle ground, between six and sixteen years, that attention needs to be directed, for it is here that the problem of the education of the artisan must be solved.

In these years, between six and sixteen, appears the great army of working boys, numbering 20,000 in Illinois alone, and rising in some states to 50,000. For the larger number of children still attending school, not yet at work, there is little attempt at direct preparation for the life of an industrial nation. Except in the Workingmen's School in New York, and the Jewish Manual Training School in Chicago, there is little evidence, in any curriculum, of thought for the future of the working boy.

For the majority of American children there is no school life after twelve or thirteen years of age. The old apprenticeship is gone, but the old tradition lingers, according to which the working-class child at the age of confirmation is ready to become the working boy.

Many children fall out of school early from sheer lack of interest in the purely scholarly course which, alone, is offered them; and some parents, chiefly inexperienced immigrants,

approve, really believing that the children will learn a trade when they enter a factory.

In the public schools, wherever a primary is in a building by itself, as it very frequently is, parents and children are prone to assume that the end of the primary is the end of school. This impression is strengthened by the policy of the Boards of Education, which nowhere supply as many seats in the upper grades as in the lower ones. Especially is this true of manufacturing districts of the great cities. This whole policy of the Boards of Education, of supplying diminishing accommodations in the ascending grades, shows that the public mind is still dominated by the tradition that the workingman's child is ready at the age of confirmation to enter the industrial army.

From parish schools, both Catholic and Lutheran, boys eleven and twelve years old have carried letters of recommendation stating that the bearer is a worthy boy and has finished his education. The bearer can usually write his name, but he cannot always write more than that, nor always spell the name of his city, state, and nation, nor the name of the street in which he lives. When the bearer presents his letter to a law-abiding manufacturer he is told, of course, that he cannot go to work until he is fourteen years old. But he replies that he has finished school and graduated and been confirmed. Such a child does not go back to school. He merely finds work in some occupation which does not fall under the factory law. Children sent out from public and parish schools, during the past fifteen years, under the legal age for work, constitute today a heavy burden upon every manufacturing community.

A most promising deviation from the established policy of the Boards of Education has been undertaken by way of experiment, in Chicago, at the suggestion of Mr. Thomas Cusack, a member of the board, representing a large manufacturing district. An unusually fine schoolhouse has been built to contain all the grades including kindergarten and high school, with manual training in every grade and ample provision for teaching cooking. The University of Chicago grants scholarships every

year to the two graduates having the best records throughout the school. The kindergarten and primary pupils are stimulated to remain in school, for they see, every day, the high school boys and girls in the same building with them. In its first years, 1894-5 and 1895-6, this school showed an unusually large percentage of children advancing from primary to grammar grades, and from grammar to high school. It cannot be known how much of this was due to the manual training and how much to the presence of all the grades in one schoolhouse. The result of the combination, however, commends itself to all who are interested in prolonging the school life of working-class children. It is the more brilliant because the schoolhouse stands in the very heart of the great Bohemian colony of wage-earners.

Contrast with the advantages offered by this model school, typifying the ideal unity of the school system, the plight of the boy who goes to work at fourteen, even under the cheerful assumption, rarely borne out by the facts, that he is reasonably well instructed according to the methods of today. The trades unions will do something to limit his opportunity to learn a trade, but their power in this direction is trivial compared with the extinguishing influence of the industrial evolution. The automatic self-feeder is everywhere, and machines are made by machines. Whether the raw recruit wraps caramels, or carries boards from the buzz-saw to the board pile, or pastes labels on tin cans, or performs any one of the stupefyingly simple manipulations which fall to the lot of the children, his occupation teaches him little else than instability; and he comes to manhood a worthless wight with all the energy and hope gone out of him and no skill acquired in any direction.

It is children who have "grewed" in this way who form, all through life, the rank and file of the great army of the unskilled. They are the last to be taken on and the most wretchedly paid in good times; in bad times they are the first to be discharged. It is for such as they that we go to the expense of woodyards in winter. They are always on the mind of the friendly visitor, for they are always on the verge of pauperism; from time to

time they fall into the abyss. Many of them end as tramps, beginning their career as little children roaming the streets of the great cities in search of a dozen different occupations in a year.

This nation will be what the children make it; and they will be very largely what the schools make them. Today they are growing up industrially incompetent; and they will continue to do so until we make the schools as democratic for the years from ten to sixteen as they are now for the years from six to ten.

In the interest of the national welfare this horde of incompetents should be checked. And to this end I plead for the occupancy with manual training of the years from six to sixteen. As the industrial life becomes inadequate to its old function of making the craftsman it behooves the nation to widen its conception of the public schools to embrace this task.

Instead of working all head and no hands in the primary school, and all hands and no head forever after in some wretched, brainless manipulation, let us have every child using both head and hands in every grade from kindergarten to high school. Let us make the tool as much at home in the schoolroom as the pen and pencil. Let the boys work at woods and metals as they now read books and write letters, learning the qualities of materials by handling them constructively. Let us have the girls as intelligent concerning the nutritive qualities of foods and the perils of drinking-waters as they are concerning the American Revolution.

When the school library and school workshop are coördinate parts of the public school system the Fourth of July floods of oratory concerning the dignity of labor may, perhaps, be safely dammed into narrower channels; for the dignity of labor will then form a part of the daily experience of the boys and girls. Today their experience teaches them that this nation believes that there should be scientific and literary education at the cost of the community, extending over several years, for one set of children; while for another and much larger set there are at most four years of meager reading, writing, and arithmetic, fol-

lowed by entrance upon the work of life in early childhood, with no previous preparation for it and no unity whatever between the school and work.

It may be said that there are already schools having manual training classes; but this does not alter the fact that, taking the whole country into consideration, it is the sons of the business and professional men who receive manual training and the son of the artisan who gets none. The workingman who knows his trade only as a trade, and not as an art or a craft, aspires to work his boy into commerce or a profession; but the man of assured position wishes for his son the continued advantages of the manual training begun in the kindergarten, and he gets them. It is one of the many anomalies of the present educational situation that manual training is chiefly fostered in communities which, from the industrial point of view, need it far less than do the manufacturing centers. This is evidence of the acknowledged pedagogical value of this training; but it is proof, also, that we have not yet recognized its industrial and social value. At a stage of industrial development in which every waste product of the material world is scrupulously utilized, the precious latent talent of the working-class children is recklessly left out of account in our general scheme of education for the years from six to sixteen.

It is not the purpose of this paper to urge any one scheme of manual training. We may find, with growing experience, that there are certain pedagogical principles underlying given forms of work, as we have already found that drawing possesses a distinct pedagogical value, besides serving the children subsequently in industrial ways. Sloyd is still in so incipient a state that its teaching savors of the amateur, though the use of the knife may be the beginning of greater things. This is not the place, however, for discussing the relative merits of this or that branch of instruction, but rather to urge the adoption of the principle of extending manual training to all the grades of all the schools, not merely at the option of the high school boy. While this principle is reaching adoption, and provision making

for carrying it into effect, pedagogues may dispute among themselves as to which form of work is best adapted to each part of the country and each age of the child. The wisest cannot foretell what the ideal school will be when child study has gone farther in this direction.

There will, doubtless, always be a need for special schools, to fit boys for work in special industries, such as the woodworking schools of Northern Michigan and the Textile School of Philadelphia. These schools of arts and crafts are maintained to meet the need, in some one branch of manufacture, for employes versed in its technicalities. Admirable for their purpose, these schools do not, are not intended to, reach the private in the industrial army. They cannot, therefore, touch in any vital way the education of the working boy.

These schools of arts and crafts bear a certain analogy to the artillery, the commissary, or the scouts, of an army. They fit a small number of pupils for a special service. They do not draft a corporal's guard, drill them, and send them into disastrous competition with the less favored battalions of the rank and file. This the trades schools are accused of doing.

The energy manifest in the movement for trades schools justifies the twofold comment, that the old trades themselves have become very precarious; and that the absorbent power of each trade is limited. If boys are fitted for a trade which is already being supplanted, surely no service is rendered them. If trades-school graduates are poured into the narrow channels of the few remaining skilled trades, there is danger of overfilling the channels disastrously.

If, on the contrary, the public schools turn out thousands of youths with facile hands and trained judgment, the danger of overcrowding should be reduced to a minimum, for the versatility of the boys should enable them to meet all the industrial needs of the moment, to avail themselves of every sort of industrial opportunity as it presents itself. It is much to be hoped that the energy now directed to the foundation of trades schools may be won for this larger field of endeavor.

It was the idea of the early advocates of the public schools that the child must be taught the three R's to enable him to perform intelligently his duties as a citizen. Slowly we have come to realize that the political life rests upon the industrial life, and that we cannot make the boy a worthy citizen unless we make him a self-supporting man, versatile, self-reliant; equipped, so far as education can achieve this, for any change in the conditions of his occupation. We have still to recognize that this work for the boy cannot be done in the years from six to twelve, that it demands greater maturity in the boy, and more time for the teacher. We must draft our army of working boys back into the public school, offering them manual training in all the grades. This is the reverse of a class measure, for it presupposes that the workingman's child is not going on in a rut. It aims to discern all the latent talent in all the children, not to drill a corporal's guard for a vanishing trade or one already overcrowded.

It has taken long time and hard work to make the schools as good and as general as they are now; and the nation is more adequate to the task before it than it has ever been. We were never so rich in money and equipment; there were never so many well and wisely trained teachers. It is only our ideals that are mean. Let us broaden them to embrace all the children and fit them for the whole of life.

FLORENCE KELLEY,

Chief Inspector Illinois Factories and Workshops

CHICAGO.